REMARKS

The above-captioned patent application has been carefully reviewed in response to the non-final Office Action to which this Amendment is responsive. Claims 1, 5, 8, 9, 11, 15, 16, 22, 31, 32 and 35 have been amended in an effort to further clarify and particularly point out that which is regarded as the present invention. Claim 12 has been canceled. To that end, it is believed that no new matter has been added.

Claims 1-36 are pending in the above-captioned application. The Examiner has rejected all Claims 1-36 on the basis of certain prior art, in particular based on the combination of Patterson et al. (U.S. Patent No. 6,064,156) and Keller et al. (U.S. Patent No. 4,123,685) under 35 USC §103(a). Applicant respectfully requests reconsideration based upon the amended claims and the following discussion.

In order to establish "prima facie" obviousness rejection under the Patent Statute, each and every claimed limitation must be found in the prior art or its substantial equivalent, either singly or in combination. Those limitations that are not found must be notoriously well known in the field of the invention at the time thereof to one of sufficient (e.g., ordinary) skill in the art.

Moreover, there must be a motivation in the prior art as a whole to make the purported combination of references. That is to say, the combination cannot be made through impermissible hindsight (advance knowledge) of the invention and not as a "piece-meal" extraction of features from references. To that end, the references must be read in their entirety such that the purported combination does not destroy or seriously affect the teachings or operability of any reference. Put another way, such combination would be evidence of teaching against a combination wherein the teachings would be compromised.

Patterson et al. (U.S. Patent No. 6,064,156) describes a high flux ion source for space applications, and more particularly for a mass analysis system. The ion source, as such, includes the rudimentary elements an ion source would typically contain, including an anode with an interior region into which an electron stream is injected. The cited primary reference does describe a method for improving the

contamination of the ion source, but this described method refers to cleaning methods for source elements prior to their assembly. The contamination issue relating to the present invention, on the other hand, comes from in-situ generated deposits from normal operation of the ion source. This distinction is significant regarding motivation to combine references, particularly the Keller et al. patent, since the problem of contamination of in-situ deposits is not considered.

Turning now to the secondary reference, Keller et al. (U.S. Patent No. 4,123,685) does indeed describe a replaceable anode segment (see Fig. 3, element 32 as held by support 31). This segment differs from Applicants' present design, however, in that the replaceable anode segment can be removed for replacement only by extensive disassembly of the ion source. To that end, and using the Examiner's logic, any anode structure in a sense is replaceable in that it can be "torn down" for replacement with a new anode structure being added. Applicants acknowledge such replacement structures, such as those described by Keller, are evident in the field. In contrast, however, the replaceable liner of the present invention is an open-ended sleeve member that can be inserted into or removed from the existing anode structure without requiring disassembly of the ion source, including the anode structure. In addition, removal of the Keller replacement element renders the ion source inoperative whereas the presently claimed replacement liner does not necessarily limit operation upon removal thereof, presuming no substantial insulating deposits have accumulated.

Applicants have amended each of the independent Claims 1, 15, 22 and 31 to positively recite that the releasable anode liner is selectively fitted relative to the anode structure of an ion source without requiring disassembly thereof. This essential feature is clearly absent from the Keller or any other presently cited reference. Additionally, language has been added relative to the structure (open-ended sleeve member) of the herein claimed liner. As a result, it is believed there can be no *prima facie* obviousness rejection under the Statute. Claims 2-11, 13, 14, 16-21, 23-30 and 32-36 are also believed allowable since these claims depend therefrom. Reconsideration is respectfully requested.

In summary, it is believed the above-captioned patent application is now in an allowable condition and such allowance is earnestly solicited.

If the Examiner wishes to expedite disposition of the above-captioned patent application, he/she is invited to contact Applicants' representative at the telephone number below.

The Commissioner is hereby authorized to charge any additional fees associated with this communication or credit any overpayment to Deposit Account No. 50-0289.

Respectfully submitted,

WALL MARJAMA & BILINSKI LLP

By: _____

Peter J. Bilinski
Reg. No. 35,067

PJB/cmn
Telephone: (315) 425-9000

Customer No.: 20874